

## Abstract of the Disclosure

Scan distributor, collector, and controller circuitry connect to the functional inputs and outputs of core circuitry on integrated circuits to provide testing through those functional inputs and outputs. Multiplexer and demultiplexer circuits select between the scan circuitry and the functional inputs and outputs. The core circuitry can also be provided with built-in scan distributor, collector, and controller circuitry to avoid having to add it external of the core circuitry. With appropriately placed built-in scan distributor and collector circuits, connecting together the functional inputs and outputs of the core circuitry also connects together the scan distributor and collector circuitry in each core. This can provide a hierarchy of scan circuitry and reduce the need for separate test interconnects and multiplexers.